RX 13

Memorandum

RIVER STONE

The purpose of this memorandum is to provide some insights into both the underwriting and the post-closing execution of Alta Mesa ("Siver Run II," "Alta Mesa" or the "Company"). The transaction has been a disappointment on a variety of levels, and the operational struggles that have overwhelmed the Company have been further impacted by broad investor apathy that has overtaken the public universe of independent exploration & production ("E&P") companies. Riverstone is dedicated to pursuing a host of initiatives underway to restore value to common equity, which include detailed financial and operating oversight as well as capital structure optimization efforts. While we expect the course of these efforts to take 18-36 months to bear fruit, we are committed to improving the profile of the investment from where it stands today.

Silver Run II was predicated on an investment thesis that proved successful at Centennial Resources ("Silver Run I" or "Centennial"). This memo will outline the facts surrounding the thesis behind Silver Run II conceptually as it was informed by Silver Run I, as well as specific facts and challenged encountered at Silver Run II.

When Riverstone underwrote its investment in Centennial, there was no "stand alone" E&P company that was solely and exclusively focused on the Delaware Basin. While there was a number of Permian Basin-focused companies that had achieved significant market success and investor attention (i.e., Diamondback, Parsley, RSP), several of which had expanded in to the promising but as-of-then unproven Delaware, none had been *exclusively* focused on the Delaware, which was far less mature in terms of production history, well results and operator attention. This is relevant for two principal reasons.

First, there was significant consideration made as to how a stand-alone Delaware Basin company might trade. Identifying the appropriate multiple and discount to what we believed would ultimately be its peer universe was a critical exercise. Second, there was limited production history on the wells and acreage that comprised the base of the Centennial acreage package. When Riverstone underwrote its investment in Centennial, it announced its July 2016 deal at a $1.8 billion valuation, which (outlined in public press releases) represented 12.6x 2017 EBITDA (*next* calendar year) on 42,500 acres and 7,200 boe/d of production. What is critical to note is that there were only 51 horizontal completions on the Centennial acreage acquired, and of those 51, the overwhelming majority were failed or commercially unsuccessful from early generation completions. In the Wolfcamp A (the overwhelming basis for value in the Centennial transaction), there were only 8 wells that had generated normalized cumulative production data and which were at or above the type curve that Riverstone and Centennial used as the basis for its deal evaluation; only 3 of those wells had been on line for 18 months or longer. However, there was a model (geologic- and reservoir-based) developed by the management team (led by Mark Papa, former CEO of EOG Resources, a $60+ billion, industry leading E&P concern) to determine what representative type curves and well economics c/would be if desired completions within target landing intervals were achieved. This plan was implemented, which ultimately led to a 10x growth in production (>70,000 boe/d) and a >$20 share price (>2x MOIC) inside of ~24 months. The ensuing decline in Centennial stock price since its peak is entirely <u>un</u>correlated to the Company's asset performance: the market test for ownership in SMID-cap E&P shifted nearly entirely from (a) growth to (b) investors

demanding free cash flow sustainability, a transition which takes both time and strategic retooling to achieve. Simultaneously, market multiples contracted by >50% (8-10x forward EBITDA to 3-5x).

In order for Silver Run I to achieve the growth aspirations to justify a 12.6x 2017 multiple (and grow into a 6.6x 2018 multiple), a significant increase in activity would be required. In the 18 months preceding the July 2016 deal announcement, Centennial had only run 1-2 rigs across its position (depending on the month), versus the anticipated 5-7 rigs that was forecast as necessary to deliver the growth wedge that underpinned the multiple compression referenced above. *These Silver Run I fact patterns are relevant because they very much served as the conceptual basis for execution in Silver Run II*, although there were/are notable differences, which we will outline below. The parallels were convincing: substantial running room with geologic data underpinning a reservoir model led by a former CEO with investor renown (in the case of Silver Run II, Jim Hackett, former CEO of Anadarko Petroleum, another leading $60+ billion, industry leading E&P concern). Not only had Anadarko identified and scaled a number of shale positions in North America, but it had arguably set the standard for operational integration and flexibility by utilizing its midstream footprint connected to its upstream efforts to create value for its shareholders (a key premise in the Alta Mesa evaluation, as detailed below).

Silver Run II merged with Alta Mesa and Kingfisher Midstream in a $4.5 billion deal in an announced August 2017 transaction. Like Silver Run I (Centennial), there were no pure play, stand-alone, under-pressured STACK independent E&Ps, so the opportunity was re-presented to create another "new category" leader like was done with Centennial under the leadership of a similarly respected industry leader and veteran. The following key market-based facts provide some context as to the broader environment at the time:

- ✓ At the time the Alta Mesa deal was announced, Centennial's stock price traded between $17-18/share during August 2017, up >70% from its merger price of $10/share in 2016, validating the acreage-to-production growth conversion story for a new category company;
- ✓ Although there were no E&P companies of scale that were exclusively focused on the STACK, at the Alta Mesa announcement, E&Ps with significant STACK exposure such as Newfield and Cimarex traded at 7.8x and 8.3x next twelve month EBITDA, respectively, while the broader E&P market traded within a 7-10x forward multiple range;
- ✓ Today, Cimarex (formerly a $12 billion company) trades 52% lower than it did when the Alta Mesa deal was negotiated, and Newfield sold to EnCana in a November 2018 deal at a pre-deal announcement price that was 42% lower than the summer of 2017

What differed between Alta Mesa and Centennial, however, was the strength of the data that underpinned the technical evaluation of Alta Mesa (data that was missing or very thin in Centennial, as noted above). In Alta Mesa, there was a 5+ year history of 205 horizontal wells that comprised the data set for the technical evaluation of both the reserves and the drilling potential of the acreage. These wells featured completion histories that represented "early generation" to "Generation 3+" completions, where critical variables modifications were tested and observed (i.e., lateral lengths, proppant loading, cluster spacing). 167 of those 205 wells had production histories (the rest were waiting on completion or awaiting tie-in). The wells spanned the entire geographic reach of the position (north, south, east and west) that effectively provided significant downhole information that allowed a buyer to "map" the entire position and determine the ultimate recovery of the resource. Riverstone worked with, as advisor, Tudor Pickering Holt ("TPH"), a leading and respected E&P A&D advisory firm, who developed its own, independent technical and asset-based model, the conclusions of which proved

more aggressive/robust on a recovery and location count basis than what was ultimately underwritten by Silver Run II.

Underscoring the Seller's commitment to the Silver Run II project, of the $4.5 billion in transaction consideration, $3.9 billion was attributed to equity and $0.6 billion to debt. Of that equity consideration, $1.8 billion was in the form of roll-over equity from funds affiliated Highbridge Management, Bayou City and management (Hal Chappelle (CEO), Mike Ellis (COO) and Mike McCabe (CFO)). In fact, the Sellers of Alta Mesa rolled 80% of their equity into the Silver Run II transaction (compared to a 10% roll from the sellers of Kingfisher Midstream), a level of rollover that still stands out amongst private equity-led change-of-control transactions in the oil and gas space. It was subsequently revealed (post-closing) that the comprehensive Silver Run II transaction for both Alta Mesa and Kingfisher also competed against a bid for Kingfisher Midstream standalone from a multi-billion dollar, publicly traded midstream company at a valuation in the $1.4-1.5 billion range for Kingfisher. Riverstone funds, which owned approximately one-third of the equity, was joined in Silver Run II exclusively by investors who had the opportunity to *not* participate in the public entity but who – all of whom had years of investment history with Alta Mesa – elected to roll their substantial profits in their base investments into the new transaction.

As alluded to above, one way in which Silver Run II was postitively differentiated from Silver Run I was its incorporation of a stand-alone, yet related, midstream entity (Kingfisher Midstream). Kingfisher's volume forecasts were predicated on the capture of growth volumes from Alta Mesa, and it was represented both in diligence (as offered by the sellers) and diligence conducted by Riverstone that additional volumes (in the form of dedicated acreage from offset operators) was in various stages of capture (e.g., negotiation, execution), and that the Kingfisher system would benefit from the momentum of additional operators' drilling budgets in the basin. Of the 258,000 acres under contract at the time of the Silver Run II transaction, 137,000 of those acres (>50%) were Alta Mesa acres. Another 40% came from 2 operators (Staghorn (which became Chisholm) and Gastar). Chisholm, backed by Apollo Management, dramatically reduced rigs in the face of the market correction of 2018 (and following Silver Runs II's 2017 transaction), and Gastar ultimately reorganized under debt pressure from Ares Management and decreased activity to essentially no continuously active drilling rigs. Importantly, the all-in fee for the Alta Mesa volumes dedicated to Kingfisher were/are materially more attractive to Kingfisher than the non-Alta Mesa volumes, so any underperformance at Alta Mesa more dramatically impairs profitability than underperformance/underdelivery from other producers. Finally, it was represented to Silver Run II during diligence than nearly 280,000 *additional* acres were under negotiation with other operators (e.g., Chapparal, Red Bluff, Highmark), none of which materialized in any substantial way following the closing of the Silver Run II transaction. While this was due, in part, to Alta Mesa's public stock performance in 2018 which drew negative attention to the Company and the curtailed any desire from independent operators to contract with a system captive to that public entity, it was also due in part to the extreme financial stress that these private operators faced in prosecuting a negative free-cash flow drilling wedge in 2018 as the market environment so dramatically turned.

Unlike in the Permian, for example, where acreage and operations are balanced amongst privates, public independents and majors, the underpressured oil window of the STACK where Alta Mesa is the dominant player was predominantly controlled by private equity back independents. The consequence of this capital formation profile of the basin was that when the debt and equity capital markets corrected out-of-favor against growth-driven E&Ps, the funders of these entities lost their appetite to fund capital to grow into an uncertain exit environment. This negative reinforcement cycle further curtailed base volume growth with third-party producers, and either greatly reduced or all but

eliminated the prospects for robust future growth wedges from a diverse set of contracted operators. To illustrate this point, Kingfisher assumed 9 and 10, respectively, Alta Mesa and third party rigs on its acreage in 2017, growing to 12 and 13, respectively, by 2021, a respectable and defensible growth profile (that is to say, not overly aggressive in quantum or breadth). In contrast, however, the activity on acreage dedicated to Kingfisher from all operators is less than 6 rigs in total today, owing to the Alta Mesa and offset operator activity reduction profiled above.

Following the closing of Silver Run II's acquisition of Alta Mesa, there were several fundamental breakdowns, which can be principally surmised into a number of categories below. It is important to note that Riverstone met a cascading series of disappointments with swift reaction, but underscoring the compressed timeframe during which these events took place, it can be noted that the stock fell from $9-10/share in February 2018 (at the time of transaction closing) to $4-5/share in August 2018, a period of time inside of only 7 months. During that time period, the Company's Board reviewed only two quarterly reporting periods (March 31 and June 30 ending), during which the operational disappointments below become evident, and moved swiftly to alter the cadence of activity and leadership of the Company.

In short, the management team of Alta Mesa was unqualified for the increase in industrial activity on the Alta Mesa position. In 2018, following Riverstone's investment and subsequent to the Company becoming a public company on February 9, 2018, management executed on a capital budget in 2018 that saw $994 million of capex spent, which compares to $371 million of 2017 capex spent. When management was operating 2-4 rigs in the prior 2-4 years, the increase to 6-8 rigs required a degree of management skill that was, in hindsight, above that of the existing team. To scale to that level of execution, planning and precision around drilling contractors, service providers, land readiness and operator partner relationship management is critical, complex and nuanced. While this commensurate level of increase was successfully executed at Centennial, Mark Papa did so after high-grading his operations team from the team that came with the Centennial acquisition. By way of comparison, Centennial had completed 10 gross wells in the year prior to Silver Run I's acquisition, and had completed >70 wells in the year following. The team at Alta Mesa, who had essentially been with the asset since inception, was arguably better skilled at prospecting and *delineating* resource than it was at operationalizing a development program.

The intention in 2018 was to follow the playbook that was successful for Centennial and a host of oil high-growth, oil-weighted E&Ps: increase rig activity levels to deliver top-quartile oil production growth that would, as a result, command a premium trading multiple. 2018 production was 30 mboe/d compared to 21 mboe/d in 2017. Although the actual, delivered growth in 2018 approached 50% (achieving a top-tier growth objective), the capital efficiency was very poor. It was revealed to the Board only in advance of the August 2018 earnings release (which was only 6 months following closing) that the underlying returns for the capital spending wedge were generating inferior returns to what was modelled by prior management and provided to the market. Ultimately, this underperformance of the resource was due to two primary culprits, both unknown at the time, but which have been subsequently unveiled: (i) down-spacing the wells too aggressively in 2018 such that parent-child interference caused, what we believe, to be an irreparable degradation of returns in entire sections of land and (ii) modifications in completion designs which increase completion intensity <u>and costs</u> per well while not increasing productivity, all the while damaging productivity because the subsurface, unlike deeper reservoir targets in the Permian or deep-pressure STACK, could not withstand those increased completions changes.

The underwriting data for Alta Mesa was based on 59 “Generation 2” completions in the Osage (that had histories dating as far back as 2014) and which had locations spanning from the extreme north to the extreme south of the acreage position; 88 “Generation 2.5” completions in the Osage; 19 in the Meramac; and 32 wells in the Oswego. The third party evaluation conducted by TPH identified in excess of 2,000+ development locations across those three principal formations, with IRRs at strip at the time (mid-$50s) ranging from 57-67% in the Osage at $3.5 million drilling and completion costs (D&C). Despite this data, the now prior management prosecuted a 2018 plan where they significantly altered completed design, deviated dramatically from the historical $3.5 million D&C costs (delivering closer to $4.5 million), and aggressively prosecuted (not just tested) down-spacing that degraded recoveries and IRRs. In 2018, 174 wells were drilled and completed, nearly all sub-optimally and with negative returns. For a company that had very limited data on downspacing, the 2018 plan saw the overwhelming amount of upstream capital dedicated to well locations that had spacing that was tighter than any other spacing efforts the Company had previously employed. Further, in an effort to demonstrate even higher recoveries than what was modeled, the Company increased proppant loading and cluster spacing, thereby “spending more” on each well in the hopes of recovering more oil. Because it was simply not a portion of the capital budget allocated to these modifications, but essentially all of it, at the point at which the data showed conclusively the error of this approach (which can only be considered after months of production data is online), it was well into the 4th quarter of 2018 when it became evident to the Board that the capital plan was destroying value and the Company needed to essentially reduce rigs to zero while it determined the most viable path going forward.

While the corporate objectives of this significant deceleration was/is to (a) continue to observe production histories of 2018 wells to identify best practices for optimal completion designs, (b) preserve liquidity and (c) execute on only high-graded prospects in the inventory, the impact, however, in the marketplace is an expected (a) declining production base and cash flow forecast and, as a result, (b) weakened financial leverage metrics.

The Board replaced management in 4Q 2018. Riverstone representatives on the Board supported the removal of the existing team but did not direct it, for it is important to note that Riverstone did not and does not control the Board, but is joined by Highbridge, Bayou City and independent Board members. It can be noted that these Board representatives who had been investors with these managers for several years had the opportunity to see their abilities up close prior to the Silver Run II transaction and validated their choice as stewards for the business following the transaction consummation. The replacement management team, led by Randy Limbacher, was sourced by Riverstone representatives to the Board, and represents the next step in an ongoing engagement to retreat and retrench.